AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1-5.   (Canceled)

6.   (Currently Amended)   The method according to claim 26, further comprising, defining in ~~the switches~~ each switch in a WLAN access network, one uplink VLAN for each Access Point (AP) ~~or for each of one or more groups of APs, said uplink VLANs,~~ each uplink VLAN for carrying uplink traffic from ~~the APs~~ an associated AP and the hosts connected to the ~~APs~~ associated AP to the access router, wherein the uplink VLAN is extended to incorporate the associated AP to prevent hosts connected to the associated AP from communicating directly with each other through the associated AP.

7.   (Canceled)

8.   (Currently Amended)   The method according to ~~claim 7~~ claim 6, further comprising:

providing in the switches, VLAN tags for the frames sent from the hosts to the access router; and

configuring the access router to be VLAN aware.

9.   (Canceled)

10.   (Currently Amended)   The method according to claim 26, further comprising, retrieving by the access router, address mapping information for the hosts during ~~the user~~ a user authentication procedure.

11.   (Currently Amended)   The method according to claim 26, further comprising, retrieving by the access router, address mapping information for the hosts during ~~the IP~~ an IP allocation procedure.

12.   (Previously Presented)   The method according to claim 26, further comprising, providing more than one access router in the access network, the VLANs being configured such that the access routers belong to the same VLANs.

13-17.   (Canceled)

18.   (Currently Amended)   The system according to claim 27, wherein the at least one switch is in a WLAN access network, and includes means for configuring one uplink VLAN for each Access Point (AP) ~~or for each of one or more groups of APs, said uplink VLANs,~~ each uplink VLAN for carrying uplink traffic from ~~the APs~~ an associated AP to the access router, wherein the uplink VLAN is extended to incorporate the associated AP to prevent hosts connected to the associated AP from communicating directly with each other through the associated AP.

19.   (Previously Presented)   The system according to claim 18, wherein the access router is VLAN aware, and the at least one switch includes means for providing VLAN tags for the frames sent from the hosts to the access router.

20.   (Canceled)

21.   (Previously Presented)   The system according to claim 27, wherein the access router includes means for retrieving address mapping information for the hosts during a user authentication procedure.

22.   (Previously Presented)   The system according to claim 27, wherein the access router includes means for retrieving address mapping information for the hosts during an IP allocation procedure.

23.   (Previously Presented)   The system according to claim 27, wherein more than one access router is provided in the system, and the at least one switch includes means for configuring the VLANs such that the access routers belong to the same VLANs.

24-25. (Canceled)

26.   (Currently Amended)   A method in an access network for forcing a plurality of hosts connected to the access network to communicate through the access network rather than directly with each other, said access network comprising an access router and one or more switches, wherein the hosts are in communication contact with the access router via the switches, said method comprising the steps of:

configuring in each switch, at least one port-based uplink Virtual Local Area Networks (VLANs) in the switches Network (VLAN) for carrying uplink traffic to the access router, wherein each uplink VLAN is dedicated to a single host, and each host is associated with a different switch port of the switch;

defining in the switches, one asymmetric downlink VLAN, said downlink VLAN for carrying downlink traffic from the access router to the plurality of hosts, said downlink VLAN being common to all of the hosts connected to the access network;

configuring the VLANs such that the hosts connected to the access network belong to the same IP subnet; and

forcing the switches to route traffic from the hosts a first host to a second host in the same IP subnet through the access network router, said forcing step comprising:

the VLANs forcing the switches to route uplink traffic from the hosts to the access router;

configuring the access router as an as a modified Address Resolution Protocol (ARP) proxy, wherein when the access router receives an ARP request from the first host requesting the MAC address of the second host, the access router returns to the first host, the MAC address of the access router; and

~~performing intra-subnet-routing of the traffic, thereby forcing the switches to route traffic from the hosts through the access router and the access network~~

subsequently forwarding by the access router, packets received from the first host to the second host.

27.   (Currently Amended)   A system for forcing a plurality of hosts connected to an access network to communicate with each other through the access network rather than directly with each other, said system comprising:

an access router for providing the hosts with access to the access network; and

at least one intermediate switch connected between the hosts and the access router, said at least one switch comprising:

~~means for configuring Virtual Local Area Networks (VLANs), wherein the means for configuring VLANs includes:~~

means for configuring in the switch, at least one port-based uplink Virtual Local Area Network (VLAN) for carrying uplink traffic to the access router, wherein each uplink VLAN is dedicated to a single host, and each host is associated with a different switch port of the switch;

means for configuring ~~one of the VLANs as an~~ a single asymmetric downlink VLAN for carrying downlink traffic from the access router to the hosts, wherein the downlink VLAN is common to all of the hosts connected to the access network; and

means for configuring the VLANs such that all of the hosts belong to the same IP subnet;

~~means for configuring~~ wherein the access router ~~to perform as an~~ includes a modified Address Resolution Protocol (ARP) proxy agent, wherein when the access router receives an ARP request from a first host requesting the MAC address of a second host in the same IP subnet, the access router returns to the first host, the MAC address of the access router; and

~~means for performing intra-subnet routing, thereby forcing the at least one switch to route traffic from the hosts through the access router and the access network~~

means for subsequently forwarding by the access router, packets received from the first host to the second host.

28.   (New)   A method in an access network for forcing a plurality of hosts connected to the access network to communicate through the access network rather than directly with each other, said access network comprising an access router and one or more switches, wherein the hosts are in communication contact with the access router via the switches, said method comprising the steps of:

configuring in each switch, at least one port-based Virtual Local Area Network (VLAN) for carrying both uplink traffic and downlink unicast traffic between the access router and individual hosts connected to the switch, wherein each VLAN is dedicated to a single host, and each host is associated with a different switch port of the switch;

configuring the VLANs such that the hosts connected to the access network belong to the same IP subnet;

configuring the access router as a modified Address Resolution Protocol (ARP) proxy, wherein when the access router receives an ARP request from a first host requesting the MAC address of a second host in the same IP subnet, the access router returns to the first host, the MAC address of the access router; and

subsequently forwarding by the access router, packets received from the first host to the second host.

29.   (New)   A system for forcing a plurality of hosts connected to an access network to communicate with each other through the access network rather than directly with each other, said system comprising:

an access router for providing the hosts with access to the access network; and

at least one intermediate switch connected between the hosts and the access router, said at least one switch comprising:

means for configuring in the switch, at least one port-based Virtual Local Area Network (VLAN) for carrying both uplink traffic and downlink unicast traffic between the access router and individual hosts connected to the switch, wherein each VLAN is dedicated to a single host, and each host is associated with a different switch port of the switch;

means for configuring the VLANs such that all of the hosts belong to the same IP subnet;

wherein the access router includes a modified Address Resolution Protocol (ARP) proxy agent, wherein when the access router receives an ARP request from a first host requesting the MAC address of a second host in the same IP subnet, the access router returns to the first host, the MAC address of the access router; and

means for subsequently forwarding by the access router, packets received from the first host to the second host.